BIOZIDE

Competence in Biocides
Solutions for Professionals

Instruction for use “Bed bug monitor”

General

The bed bug monitor is ideal for use by pest control operators within their service, as well as hotels, youth hostels, etc. itself.

Our bed bug monitor is currently unique in the market with regard to its kind and function. The bed bug monitor was developed together with the Albstadt-Sigmaringen University within a time of almost two years. The human body is simulated by the combination of heat and CO_2: in this way, the bed bugs get attracted and remain stuck on an adhesive surface. Thus, you can detect a bed bug infestation or you can check a control measure for their effectiveness. Meanwhile, it is important that the competing host (human, pet) won’t stay in the room for a longer time. Otherwise, it would constitute a competitive situation for the bed bug monitor and an effective detection of infestation wouldn’t be possible.

The interchangeable CO_2-generator is activated before use. After about 24 - 48 hours it provides CO_2 continuously – for 4 – 6 weeks. The integrated heating element (90 – 264 Volt / 47 – 63 Hz connection) heats up to approximately 50 °C within the bed bug monitor. This heat passes to the exterior continuously, so that there is an ambient temperature of approximately 25 – 30 °C in the surrounding of the bed bug monitor.

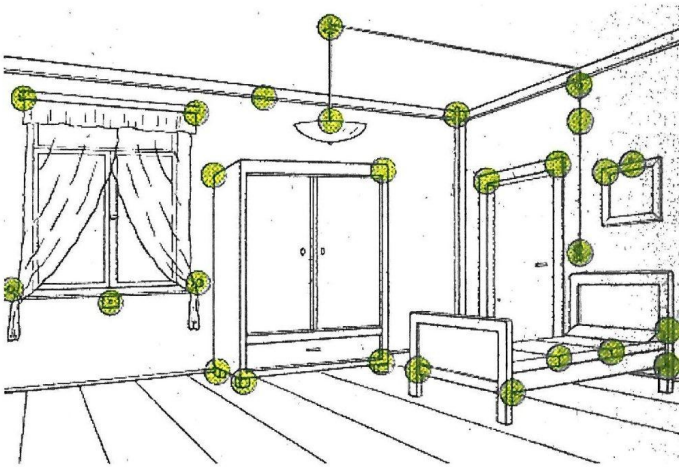
The adhesive surfaces and the CO_2-generator are available separately and can be reordered.

The bed bug monitor is ideal for use by pest control operators within their service, as well as for hotels, youth hostels, etc. itself.

Preferred locations are all dark, draught-free and well-tempered hiding places, which are in and around the sleeping area of the host. In case of suspicion, the mattress, the under-bed drawer, the slatted frame, the bedstead and the bedside tables, as well as panelling close to the bed should be inspected. But also the surrounding area mostly offers a large number of hiding places. Often, bed bugs can be found in light switches, sockets, cracks and crevices in (brick-) walls, behind wallpapers and door frames.

CAUTION! ** CAUTION!

Rooms should remain vacant during deployment of the bedug monitor



It is recommended to place the bed bug monitor on the floor in these areas or close to them. Depending on the room size and assumed infestation, several devices can be placed, if necessary. The first inspection should be carried out after approx. 1 week. Depending on the result, it can be necessary to change the position of the unit. It should be considered that bed bugs eventually don’t leave their hiding places after a blood meal for several weeks, months (up to one year). This means that you won’t have an evidence of a bed bug infestation on the adhesive surface – but it doesn’t mean that there is no infestation. This has to be considered in individual cases.

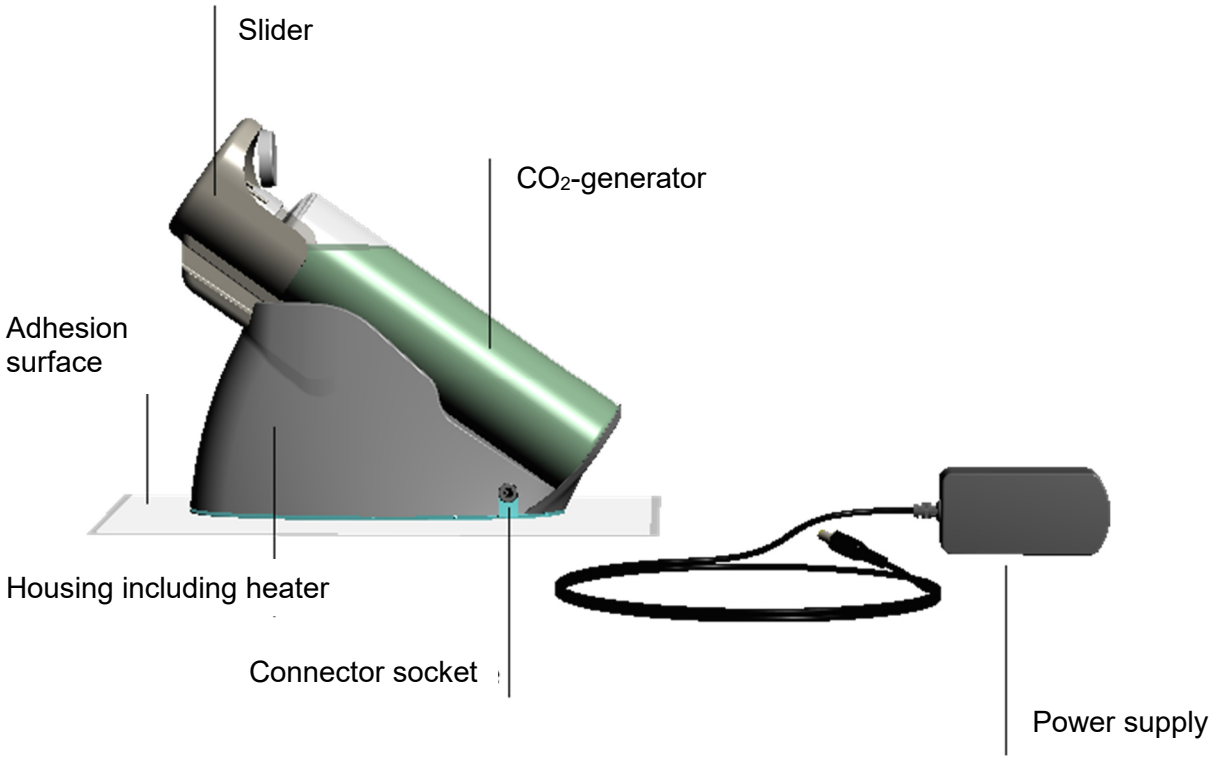
Dear customer,

Please read this manual carefully. Pay particular attention to the safety instructions! Please keep this manual for later use and pass it on to any future users of the device.

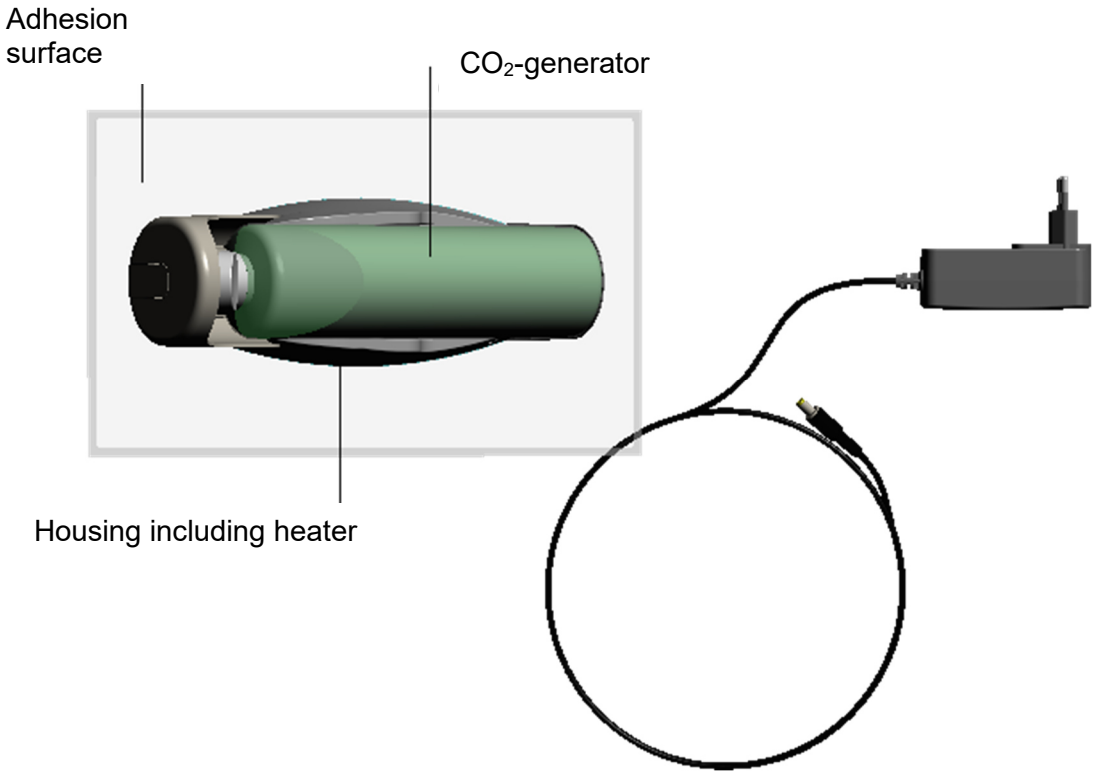
Contents

1 Caption

1.1 Front view (Figure 1)



1.2 Top view (Figure 2)



2 Safety Instructions

Safety instructions

The safety of this device meets the generally accepted engineering standards and the machine safety code. As the manufacturer, however, we see ourselves as being obliged to familiarize you with the following safety instructions.

General safety

- The device must only be connected to a power supply system with a voltage, current and frequency which are in compliance with the information given in the supplement (data sheet – wall wart ZDD 120100m-N)!
- Keep the power cord away from the hot parts of the device.
- Never unplug the device by pulling on the power cord!
- Do not operate the device when:
  - the supply line is damaged or
  - the housing shows visible signs of damage.
- Put the plug in the socket only if the device is connected.
- This device is not intended for use by persons (including children) who are unable to safely handle it due to their lack of experience or knowledge or by persons (including children) with reduced physical, sensory or mental capabilities, unless they have been

given instructions concerning the safe use of the device and are initially supervised by a person responsible for them.

Safety of children

- **Do not run the device unattended and exercise a particular duty of care towards children!**

Safety during operation

- **Caution! For functional reason the heating element becomes hot during operation. Keep away from children!**
- Do not use the heating element to heat flammable liquids!
- Only operate the device if a CO_2-generator is inside the device.
- Do not leave the device switched on unnecessarily.
- If an extension cable is used, only use a commercially available cable with a conductor cross-sectional area of at least 1.5 mm^2.
- In order to avoid danger, persons with motor dysfunctions should never use the device without an escort.

Always check the device for damage to cables, plugs and housings etc. A defective device may no longer be used.

Safety during cleaning and maintenance

- Prior to maintenance or cleaning, turn off the device and disconnect the plug.
- Do not submerge the device in water.
- The device may only be cleaned when it is switched-off and cold.
- Do not clean parts of the device in the dishwasher.
- Never pour water into the bed bug monitor - this will damage the heating element.

Do not open or repair the device. Improper repairs can result in considerable danger to the user. Electrical devices may only be repaired by qualified personnel.

If repairs are necessary, including replacement of the supply line, please contact:

- the distribution partner, from whom you purchased the device or
- the Frowein GmbH & CO. KG.

If the device is misused or incorrectly operated, we will assume no liability for any possible damages and the warranty is invalid.

3 Set-up

Set up and connect the device
Choose a suitable, horizontal, stable, unheated, dry and waterproof surface.

Ensure good air circulation and free space of at least 5cm on the sides and at the back of the device and at least 10cm above the device. The device must not be installed in rooms in which temperatures of 0°C or below may occur (the device may be damaged by freezing water).

Caution! If the device comes in from the cold and is set up in a warm room, wait for approximately 2 hours before switching on!

The device may only be connected to a grounded socket. Never use a non-grounded socket.

- Activate the CO_2-generator as described on the label. Please also pay attention to the storage and safety instructions on the label.

    1. Unscrew the cover of the flask, open the cover and remove the starter capsule. Carefully pull out the green part of the capsule in an upward direction.
    2. Pour the contents of the starter capsule into the flask and throw in the empty capsule parts.

3. Fill the flask up to the marking line (arrow) with 20° - 25 °C warm tap water (NOT over 25 °C).
4. Screw the cover of the flask tightly.
5. Break off or cut the hinged cover.

- Carefully pull the slider in an upward direction (Figure 1) and insert the flask into the intended hollow.

- Position the CO_2 adapter (slider (Figure 1) on the opening of the flask by pushing it back.

  CO_2 production will start within 24 – 48 hours (for 4 – 6 weeks), if properly applied.

- Remove the transport protection from the adhesion surface (Figure 1 and 2). Please ensure that this remains in the middle section on the adhesion surface. It serves as stand space for the bed bug monitor. Place the adhesion surface at the bottom with the sticky side facing upwards.

  Please ensure that the adhesion surface then does not come into contact with clothing, furniture or other objects.

- Place the bed bug monitor in the middle of the adhesion surface.

- Connect the power supply with the connector socket in the housing. Then plug the power supply on a suitable socket.

Regularly check to ensure that the bed bug monitor is functioning correctly during operation. When you are not using the device, please disconnect it from the circuit.

When the adhesion surface or CO_2-generator are being replaced, it is essential to separate the device from the circuit and follow the instructions mentioned above.

Only use original consumables. We assume no liability for possible damages and the warranty does not cover damages caused by wrong materials.

4 Cleaning and Maintenance

Caution! Switch off the device before cleaning. Allow the device to cool.

Caution! Never put the device or single parts of the device into the dishwasher**.** Never submerge the bed bug monitor in water.

Caution! Never pour water into the bed bug monitor - this will damage the heating element.

Do not use scratching, abrasive or corrosive agents. Wipe top and bottom of the housing only with a damp cloth.

5 Ordering Accessories

In order for you to enjoy your device for a long time and to prevent early defects, it is very important that you clean or de-dust the device regularly.

In Germany, please contact:

FROWEIN GMBH & CO. KG
Am Reislebach 83
D-72461 Albstadt
Tel. +49 7432 956-0

Outside Germany, please contact directly our national distribution partners.

6 Problems which can be solved before calling Customer Services

If the bed bug monitor does not work, you can easily find the cause of the malfunction and remedy it. Please carry out the following tests before contacting customer services.

The device does not warm up
Power supply is not correctly connected to connector socket or socket.

- Check whether all connections are correct.

Bed bugs do not stick to the adhesion surface
Transport foil was not removed or adhesion surface was laid out on the bottom turned by 180°.

- Remove the transport protection from the adhesion surface (Figure 1 and 2). Please ensure that this remains in the middle section on the adhesion surface. It serves as stand space for the bed bug monitor. Place the adhesion surface at the bottom with the sticky side facing upwards.

7 Technical Data

Mains voltage: 100 – 240 V
Frequency: 50 – 60 Hz
Heating element: 12V, ca. 3W, ca. 80 mm twin cable 2x 0.75 mm² with soldered DC mini jack 5.5 x 2.1 mm / 1.5 m connection cable with wall wart (AC 90V to 264V, 47 Hz to 63 Hz) with EU plug
(changeable plugs for US, GB, CN, AU, KO are available)

8 Disposal

Packaging material

The packaging materials are environmentally sound and recyclable.
Dispose of the packaging materials according to their labels at the local disposal points in the collecting containers provided for this.

Old devices

The symbol  on the product or its packaging indicates that this product cannot be treated as normal domestic waste, but instead must be brought to a collection point for recycling of electrical and electronic devices. By playing your part in ensuring the correct disposal of this product, you protect the environmental and the health of your fellow citizens. The environment and the health of individuals are jeopardized by incorrect disposal. For further information about recycling of this product, please contact your city hall, your rubbish collection or the shop where you purchased the product.

WEEE-Reg.-Nr. DE 91771269

ZDD120100m-N Plug-In 12 W

Country of Origin: China

Operating Temperature: 0 °C to 40 °C

Dimensions: 70 x 46 x 35 mm

Approvals / Marks:

Features:

Wall Plug Power Supply With Optional Interchangeable Plugs For International Usability

Wide Range Input (AC 100 V to 240 V)

Green Mode / High Efficiency Level

1 Year Warranty

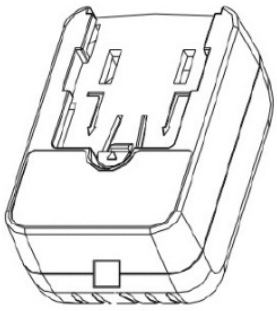
Specification:

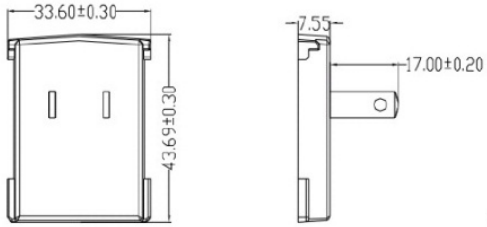
		OUTPUT						
OUTPUT	**MODEL**	Voltage	min. Load	max. Load	Tolerance	Ripple & Noise	Efficiency	Max. Power
	ZDD120100m-N	12 V	0.0 A	1000 mA	5 %	100 mV p-p	77.8 % min.	12 W

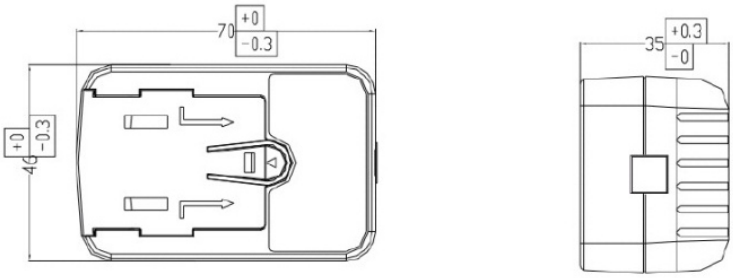
INPUT	Voltage	AC 100 V to 240 V
	Frequency	50 Hz to 60 Hz
	Current (max)	0.5 A
	Inrush Current	Protected
PROTECTION	Overload	Auto-Recovery
	Over Voltage	Auto-Shutdown
	Short Circuit	Auto-Recovery
OTHERS	Setup time	3 s
	Holdup time	10 ms
	Cooling	By Convection
	Withstand Voltage	Input to Output: 50 MΩ at DC 500 V
	MTBF	35000 hours at 25 °C ambient temperature (MIL-HDBK-217F)
	Burn-In	Min. 4 hours at 40 °C full load
	Transient Response	Within 4 % of steady state
	Temp. Coefficient	+/- 0.05 % per °C typical on all outputs
	Di-Electric Strength	Primary to Secondary: AC 3 kV / 10 mA / 60 s (HI-POT)
Environment	Temperature	Operating: 0 °C to 40 °C / Storage: -20 °C to 65 °C
	Humidity	Operating: 10 % RH to 90 % RH / Storage: 10 % RH to 90 % RH
Connection	Output	Cable: 22AWG 2464 (150 cm) / Plug: 5.5 mm x 2.1 mm x 11.0 mm (center spring)
	Input	2 Pin AC Input. Optional Interchangeable Plugs: US / EU / BS / AU
SAFETY		UL 60950 / CSA C22.2 No. 950 / EN 60950 / CE
EMC	EMI / EMS	FCC PART 15 CLASS B. EN 55022 CLASS B. AS/NZS3548 / AS/NZS4251.1 CLASS B
WEIGHT		120 g

Specifications subject to change without notice

Case color :Black. 2.Unit:mm







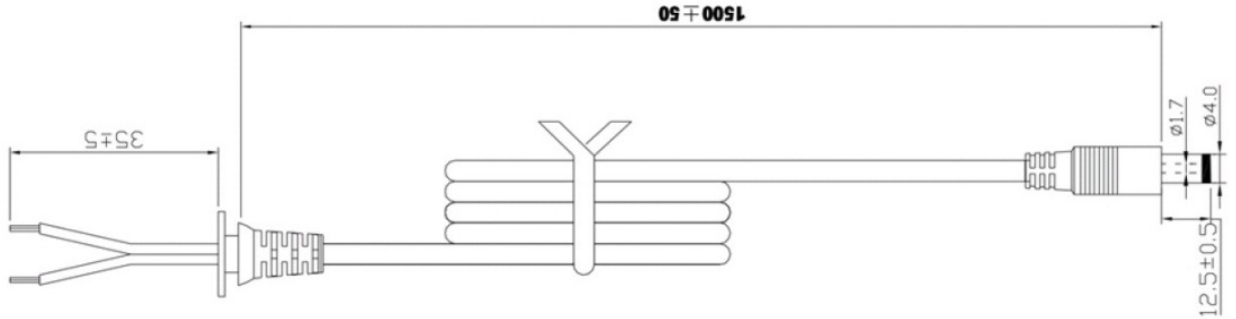
The power supply will provide input connectors as in table 8.1

PIN#	Input Voltage
1	L
2	N

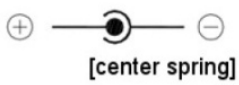
Table 8.1 Top view of AC input Pin assignment

The power supply will provide output connectors as in table 8.2

PIN#	Output Voltage
1	+12V
2	GND



1.CORD MATERIAL:2464 22#*2C.(UL APPROVAL).
2.DC PLUG TYPE:DC 4.0*1.7
3.OUT JACKET:PVC.COLOR:WHITE.
4.TEMPERATURE:80° .
5.ROHS CABLE
6.Unit:mm



[center spring]

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